

Serial No.: 09/993,158
Inventor(s): Higgins et al.

U.S. PTO Customer No. 25280
Case No.: 5113D

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REMARKS

The Pending Claims

Claims 1, 4, 7, 8, 17, 20, 25, 41, 88, 123, 130, 134, 136, 138, and 141 have been amended. Claim 2 has been cancelled without prejudice or disclaimer. No claims have been added. Thus, claims 1, 3-35, 38, 40-49, 58-72, 77-79, 81-85, 88-97, 99, 100, 102-128, 130, 131, 134-136, 138, 141, and 151 remain subject to continued examination.

Claims 88, 123, 130, 134, 136, 138, and 141 were rejected under 112, second paragraph, as being indefinite as to what the flame laminated backing composite comprises. Although Applicants do not agree with the 112 rejection, Applicants have amended the rejected claims to further define the invention and believe that the 112 rejection should now be withdrawn.

Discussion of the Rejections

Most claims were rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent 4,522,857 to Higgins (Higgins '857) in view of U.S. Patent 5,610,207 to De Simone (De Simone) or U.S. Patent 5,540,968 to Higgins (Higgins '968) either as a stand alone combination or further in view of various supplemental art. Continued rejection on these grounds is respectfully traversed and reconsideration is requested at this time in light of the present amendments and remarks.

Applicants note that, as amended, all claims specifically recite a carpet tile having a flame laminated backing composite or a flame laminated cushion back composite. As shown, for example, in Fig. 31, a flame laminated backing composite includes, for example, glass, rebond foam, and felt layers with flame laminated junctions therebetween.

With respect to, for example, Figs. 15A, 15B, 19A, 19B, 20, 32, and 37, exemplary carpet tiles may include a flame laminated backing composite of a reinforcement or stabilizing material, such as glass, a rebond foam layer such as a preformed sheet of rebond foam, and a backing, such as felt, formed by flame lamination of the glass and felt to the foam.

Applicants respectfully disagree that the Fung reference can be used as a reference as it was published after the present application was filed (published 2002). However, Applicants do not traverse that flame lamination has been used for other textile

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applications other than carpet tile in the past. Applicants believe that there is no motivation or suggestion in Higgins '857 or De Simone '207 to use a flame laminated composite backing in a carpet tile.

As regards the rejections based in whole or in part upon the combination of U.S. Patent 4,522,857 to Higgins in view of U.S. Patent 5,610,207 to De Simone, as best understood, the fundamental rationale for the rejections is that it would have been obvious to one of skill in the art to substitute a rebond foam material as taught by De Simone '207 for the foam layer in Higgins '857.

Claims 1, 41, 88, 123, 130, and 134 have been amended to call for a preformed sheet of rebond foam cushion, rebond foam, compressible foam particles, foamed polyurethane particles, or bonded chips, respectively. In at least one preferred flame laminated embodiment, a preformed rebond foam sheet has glass joined to one surface and felt joined to the opposing surface. De Simone '207 does not appear to disclose flame lamination of a preformed sheet of rebond foam. In contrast, De Simone '207 appears to be directed to forming a re-bonded foam in-situ by mixing pieces of foam with liquid polyol and liquid polyisocyanate. Hence, De Simone '207 appears to teach away from the claimed invention.

Further, as best understood by Applicants, De Simone '207 is not directed to carpet tile. Also, it appears that De Simone '207 is not directed to attached cushion broadloom carpet. It appears that De Simone '207 is directed to low density recycled foam pad. Column 2, lines 40 – 45 of De Simone '207 appear to refer to making a tri-laminate pad with a central layer of foam pieces and upper and lower layers of preferably polyurethane foam but which could be natural or synthetic materials, like metal, wood, and woven or unwoven fabrics, eg. "carpet backing" but which are preferably polyurethane foam. Typical carpet backing fabrics are jute or polypropylene. It is believed that De Simone '207 is directed to making pad or underlayment for use with separate, unattached broadloom carpet rather than for making attached cushion broadloom (roll goods) and is in no way directed to making carpet tile. Applicants believe that the reference to "carpet backing" in De Simone '207 is an example of woven or unwoven fabrics rather than to putting the recycled foam pieces of De Simone '207 on the back of carpet. De Simone '207 does not state "carpet". It states "carpet

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backing" as an example of fabric. It is known in the rebond pad industry to put a scrim on a rebond foam pad or underlayment. Applicants respectfully believe that De Simone '207 is directed to unattached pad or underlayment rather than to attached cushion broadloom. None of the Examples in De Simone '207 appear to have an upper or lower layer of fabric, much less carpet. The upper and lower layers in the Examples of De Simone '207 appear to be foam layers. Hence, De Simone '207 is not directed to carpet tile, does not enable rebond foam backed carpet tile, and does not enable rebond foam backed broadloom carpet.

Further, as De Simone '207 is not directed to carpet tile or even attached cushion broadloom carpet, neither De Simone '207 nor Higgins '857 provide the necessary motivation or suggestion for combination or for substituting the recycled foam of De Simone '207 for the foam layer of Higgins '857. As described earlier, it would not have been obvious to substitute rebond foam for the virgin foam in a carpet tile. It would have been even less obvious to substitute low density rebond foam for virgin foam. Further, it is not obvious to combine pad or underlayment art (De Simone '207) with freelay carpet tile art (Higgins '857) as carpet tiles, especially freelay carpet tiles, are required to be dimensionally stable.

As one of skill in the carpet tile art would readily understand, changes to a dimensionally stable carpet tile structure, even one layer in a stable structure (such as a freelay tile like Higgins '857), are not taken lightly, are viewed with skepticism, and are not done by even experts in the carpet tile art to save money, reduce mass, or the like (see Norton declaration).

Prior to the present invention, carpet tiles were known and rebond foam pads were known but those skilled in the carpet tile art did not use rebond pad in carpet tiles.

One of skill in the carpet tile art would not substitute rebond foam pad (low density recycled foam of De Simone '207) for the foam layer in a carpet tile. One of skill in the carpet tile art would not look to De Simone '207 for motivation or suggestion in modifying the Higgins '857 carpet tile structure.

Still further, the Higgins '857 carpet tile effectively has two stabilizing layers (layers 18 and 26). As Higgins '857 is directed to a stabilized, freelay carpet tile, one of skill in the carpet tile art would not remove one of the stabilizing layers. One does not

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make changes to a stable carpet tile structure in light of the many tile failures over the years, changes in one layer can effect the dimensional stability of the tile (cause cupping and curling, delamination), and the like. Adding a layer or substituting a new material for a layer can have a devastating instantaneous or latent effect on a carpet tile, especially a freelay carpet tile.

Applicants respectfully submit that the proposed combination of references in the rejections are inconsistent with the teachings of the cited art when considered in the context of the accepted wisdom held by those of skill in the art at the time the current application was filed. Thus, the conclusion by the Patent Office appears to not be supported by what the skilled person would have been motivated to do (or to not do).

As noted at MPEP §2142, to reach a proper determination under 35 U.S.C. 103, the Examiner must step back in time and into the shoes worn by a person of ordinary skill in the art when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination of whether or not the claimed invention as a whole would have been obvious at that time to that person. Impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. Certainly, Applicants recognize that any judgment of obviousness is in some sense necessarily a reconstruction based on hindsight reasoning. However, such reconstruction may take into account only knowledge that was within the level of ordinary skill in the art at the time the claimed invention was made. See, MPEP §2145(X)(A).

The ultimate determination of patentability must take into account the entire record. The decision is based on the legal standard of "a preponderance of evidence." With regard to rejections under 35 U.S.C. 103, the Examiner must provide evidence which as a whole shows that the legal determination of obviousness is more probable than not. See, MPEP §2142.

Thus, the essential query centers on what a person of skill in the art having the benefit of the cited references but without the benefit of the present application would have considered obvious at the time the invention was made. If the preponderance of

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the evidence does not weigh in favor of finding that the claimed invention would have been obvious to such a person, then the rejection cannot be maintained.

In his declaration, Mr. Norton notes that in actual practice, despite an interest in reducing material costs for the tile disclosed in the Higgins '857 patent, the density was maintained at about 16 pounds per cubic foot due to concerns over cushion quality and the effect on dimensional stability, long term durability and installation performance. Thus, the Office Action's proposed substitution of the low density foam pad of De Simone '207 for the high density foam layer of Higgins '857 would be inconsistent with actual historical design practices.

The earlier filed declarations establish the accepted wisdom in the art that rebond foam would not be suited for carpet tiles. As noted at MPEP §2145, proceeding contrary to accepted wisdom is evidence of nonobviousness. In addition, Mr. Norton's declaration outlines numerous perceived disadvantages of rebond foam and the De Simone '207 rebond foam material that would weigh against their use in the manner proposed by the Office Action.

In view of the fact that the carpet tile of the Higgins '857 patent is specifically stated to be suitable as a freelay commercial carpet tile, it is respectfully submitted that the evidence of record weighs particularly heavily against the conclusion that the modification proposed by the Office Action would be obvious. In this regard, Applicants note that the data in De Simone '207 actually weighs against the proposed modification since it would be considered to place dimensional stability at risk. Applicants further note that there is no indication in De Simone '207 that the rebond foam as described can be placed in a carpet tile. The design requirements for carpet tile are particularly rigorous due to concerns over dimensional stability and the like. Thus, it is respectfully submitted that the data in De Simone '207 showing reduced physical performance characteristics actually weigh against the proposed placement of rebond foam in a carpet tile.

In order to reach the invention as claimed in at least certain claims, the cited Higgins '857 structure would not only have to be modified to incorporate a rebond foam cushion but would also have to be modified to eliminate one of the stabilizing layers, to

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add a backing material, to add a quick release backing, to add a flame laminated backing composite, and the like. Applicants respectfully submit that such a major redesign weighs even further against the proposed modification and in favor of patentability.

If the evidence is properly considered in its entirety, Applicants respectfully submit that there can be no reasonable determination that the preponderance of such evidence weighs in favor of obviousness. Unless the preponderance of evidence weighs in favor of a conclusion of obviousness, the claims must be allowed. The evidence of record establishes the accepted wisdom in the art that rebond foam would not be suited for carpet tiles. The evidence also shows that one of skill in the art would have considered the proposed modification of the carpet tile in Higgins '857 to be problematic since the tile being modified is intended to be suitable as a freelay commercial tile. The evidence further establishes that the data in the cited De Simone '207 reference would have actually provided a disincentive to the proposed modification. In light of such evidence, as well as copying by others, Applicants respectfully submit that the conclusion of obviousness cannot be maintained and that such a conclusion is based on impermissible hindsight and is in contradiction to the controlling standards of patentability.

As described in the declarations, it would not have been obvious for one of ordinary skill in the carpet tile art to use the rebond foam material of De Simone '207 in a cushion back carpet tile, and contrary to the position taken by the Office Action, one of skill in the art would not have been motivated to substitute the foam layer in the tile disclosed in Higgins '857 with the rebond foam materials from De Simone '207.

In addition to the deficiency in the teachings of De Simone '207, it is also respectfully submitted that the references fail to disclose and teach away from a carpet tile with a flame laminated backing composite, much less a flame laminated backing composite including a reinforcement layer, a rebond foam layer, and a backing.

The other art relied upon in addition to Higgins '857 and De Simone '207 or Higgins '968 fail to make up for the lack of teaching in De Simone '207.

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Accordingly, reconsideration and withdrawal of all outstanding rejections is requested at this time.

Conclusion

In view of the forgoing amendments and remarks, the Examiner is respectfully requested to withdraw the outstanding rejection and to pass the subject application to Allowance. In the event that the Examiner believes that the claims would be allowable with minor changes, the Examiner is invited to telephone the undersigned to discuss an Examiner's Amendment.

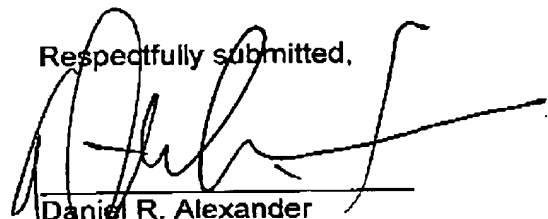
Fee Authorization: In the event that there are additional fees associated with the submission of these papers, Applicant hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 04-0500.

Extension of Time: In the event that additional time is required to have the papers submitted herewith for the above referenced application to be considered timely, Applicant hereby petitions for any additional time required to make these papers timely and authorization is hereby granted to withdraw any additional fees necessary for this additional time from our Deposit Account No. 04-0500.

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